CLAIMS

1. An optical disk comprising:

a recording area divided into a plurality of annular bands, each band being circumferentially divided into a plurality of sectors;

a plurality of grooves provided in each sector and serving as data-recording tracks; and

a plurality of lands provided in said each sector and serving as data-recording tracks, the lands alternating with the grooves radially of the disk;

wherein each groove comprises an address region in which data is recorded by in-phase double wobbles, the address region including an address selection data recording portion and a plurality of individual address data recording portions arranged along said each groove, the address selection data recording portion storing data to select one of the individual address data recording portions for reading individual address data from the selected portion.

2. The optical disk according to claim 1, wherein the plurality of grooves comprise a first groove, a second groove adjacent to the first groove, and a third groove adjacent to the second groove, the plurality of individual address data recording portions of these grooves comprising three individual address data recording portions,

wherein in the first groove, one of the three individual address data recording portions stores address

data of the first groove,

wherein in the second groove, one of the three individual address data recording portions stores the address data of the first groove, and another individual address data recording portion stores address data of the second groove,

wherein in the third groove, one of the three individual address data recording portions stores the address data of the second groove, and another individual address data recording portion stores address data of the third groove,

wherein the individual address data recording portion of the first groove that stores the address data of the first groove is adjacent radially of the disk to the individual address data recording portion of the second groove that stores the address data of the first groove, and

wherein the individual address data recording portion of the second groove that stores the address data of the second groove is adjacent radially of the disk to the individual address data recording portion of the third groove that stores the address data of the second groove.

3. The optical disk according to claim 2, wherein each groove comprises resync patterns adjacent to the three individual address data recording portions, and wherein the resync patterns corresponding to the two individual address data recording portions in which address data is stored are opposite in phase to the resync pattern corresponding to the

remaining individual address data recording portion.

4. The optical disk according to claim 3, wherein the remaining individual address data recording portion is formed with an in-phase double-wobbled pattern which is irrelevant to the address data stored in said two individual address data recording portions.

5. The optical disk according to claim 4, wherein the irrelevant in-phase double-wobbled pattern of each groove is opposite in phase to the address data of a groove adjacent to said each groove.

6. The optical disk according to claim 1, wherein the address region of each groove includes a common address data recording portion for storing frame data and band data, while the individual address data recording portions store track data of said each groove.

7. An optical disk comprising:

a recording area divided into a plurality of annular bands, each band being circumferentially divided into a plurality of sectors; and

a plurality of grooves provided in each sector and serving as data-recording tracks;

wherein each groove includes an address region in which data is recorded by in-phase wobbles, the address region being divided into a first address data recording

portion and a second address data recording portion,

wherein in a selected groove, a sync pattern and address data of the selected groove are recorded in the first address data recording portion,

wherein in another groove adjacent to the selected groove, a sync pattern and address data of said another groove are recorded in the second address data recording portion,

wherein the sync patterns of the grooves have a same phase.

8. The optical disk according to claim 7, wherein the first address data recording portion records individual address data and common address data, the individual address data including track data, the common address data including frame data and band data, and wherein the second address data recording portion records individual address data including track data.

9. A method of reading data from an optical disk according to claim 1 by using a radial push-pull technique, the method comprising the steps of:

passing a beam along a groove;

detecting address selection data recorded in the address selection data recording portion of the groove; and

selecting one of the plurality of individual address data recording portions in accordance with the detected address selection data.

10. An optical disk drive for reading address data from an optical disk according to claim 1 by using a radial push-pull technique, the drive comprising:

an optical head for scanning a groove of the disk by a beam;

a detector for detecting address selection data recorded in the address selection data recording portion of the groove; and

a selector for selecting one of the plurality of individual address data recording portions in accordance with the detected address selection data.

11. A method of reading data from an optical disk according to claim 3 by using a radial push-pull technique, the method comprising the steps of:

passing a beam along a land;

detecting a double-wobbled resync pattern formed on the land, the resync pattern resulting from a combination of resync patterns of two adjacent grooves flanking the land;

outputting a trigger signal in accordance with the detected resync pattern; and

detecting an in-phase double-wobbled individual address data of the land in accordance with the trigger signal, the individual address data resulting from a combination of in-phase double wobbles formed in the two adjacent grooves.

12. An optical disk drive for reading address data from an optical disk according to claim 3 by using a radial push-pull technique, the drive comprising:

an optical head for scanning a land of the disk by a beam;

a resync detector for detecting a double-wobbled resync pattern formed on the land, the resync pattern resulting from a combination of resync patterns of two adjacent grooves flanking the land;

a signal generator for outputting a trigger signal in accordance with the detected resync pattern; and

an address detector for detecting an in-phase double-wobbled individual address data of the land in accordance with the trigger signal, the individual address data resulting from a combination of in-phase double wobbles formed in the two adjacent grooves.

13. A method of reading data from an optical disk according to claim 7 by a radial push-pull technique, the method comprising the steps of:

passing a beam along a groove, the beam having a diameter greater than a width of said groove;

generating a first detection signal and a second detection signal, the first detection signal resulting from a sync pattern formed in said groove, the second detection signal resulting from sync patterns formed in adjacent grooves flanking said groove; and

detecting address data recorded in said groove based

on the first detection signal.

14. The method according to claim 13, wherein the first detection signal is opposite in phase to the second detection signal.

15. An optical disk drive for reading address data from an optical disk according to claim 7 by using a radial push-pull technique, the drive comprising:

an optical head for passing a beam along a groove of the disk, the beam having a diameter greater than a width of said groove;

a signal generator for generating a first detection signal and a second detection signal, the first detection signal resulting from a sync pattern formed in said groove, the second detection signal resulting from sync patterns formed in adjacent grooves flanking said groove; and

an address detector for detecting address data recorded in said groove based on the first detection signal.